REMARKS

As a result of the foregoing amendment, Claim 6 has been amended to recite that the pulling up of the ingot is carried out in a manner such that no OSF rings are caused in the ingot. In accordance with the original disclosure on page 29, lines 11-14 and Figure 5. Additionally, the claim has been amended to recite that step c is carried out in an atmosphere of 100% hydrogen, a mixture of hydrogen and argon or a mixture of hydrogen and nitrogen. This is in accordance with original claim 8 of the application. The word "or" has also been inserted in accordance with the Examiner's suggestion thus obviating the formal rejection of claim 6 as set forth in paragraph 3 of the office action. This rejection should be withdrawn.

Reconsideration and withdrawal of the rejection of claim 6 as amended as being unpatentable over Abe et al. EP '718 in view of Hourai '873 or Yokoyama et al. '910 are requested. The Examiner recognizes that Abe EP '718 does not teach or disclose pulling the ingot up such that the V/Ga and V/Gb becomes 0.23-0.50mm^2/ minute °C, respectively. The Examiner relies on Hourai as teaching that the V/G value effects the density and distribution of defects in the crystal and the production of an infrared red scattering defect developing region at V/G ratios of greater than approximately 0.23 and a high pulling rate of V1. The Examiner concludes that it would have been obvious to modify Abe et al. by using the V/G for the center and edge as taught by Hourai.

The Examiner further relies on Yokoyama et al. as disclosing a V/G ratio greater than 0.25 mm^2/°C to produce a silicon ingot with only a void effect region and refers to Fig. 2 of this patent.

However, it is submitted that none of these references either taken alone or combined suggest the process as presently claimed wherein no OSF rings are produced in the ingot. Thus,

Fig. 2 of Hourai '873 shows that when the pulling rate if V1, the infrared scattering defects occur in the crystal region where the V/G curve traverses the infrared scattering fault developing region and the OSF ring developing region and with a pulling rate of V1, the OSF ring develops at the outermost periphery of the of the wafer as set forth in column 5, lines 42-48. Moreover, while the Examiner asserts that Yokoyama et al. '910 teaches V/G ratio greater than 0.25 $mm^{2/}$°C minute with only a void effect region as shown in Fig. 2. However, it is clear from Fig. 2 that the ingot pulled up at the V/G ratio of 0.25 mm2/°C includes the OSF ring at the outer most periphery thereof.

This is in complete contrast to the procedure defined by the present claims but by claim 6 wherein no OSF rings are produced in the ingot. The references relied on by the Examiner provide no information as to such a process and certainly do not suggest it. Accordingly, the rejections on these references are impenetrable and should be withdrawn.

Respectfully submitted,

Dated: June 22, 2005

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